COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS & ENERGY

Investigation by the Department and the EFSB into Long-Range Forecasts by Electric Companies	)	D.T.E. 98-84/EFSB 98-5

COMMENTS OF REALENERGY, THE JOINT SUPPORTERS, HESS MICROGEN, NUVERA FUEL CELLS, NORTH BATTERY DEVELOPMENT LLC AND BERKSHIRE DEVELOPMENT LLC ON PROPOSAL FOR ALTERNATIVE INTEGRATED RESOURCE PLANNING PROCESS

Pursuant to the Hearing Officers' Request for Comments in these joint proceedings dated August 19, 2002, RealEnergy, Inc. ("Real Energy"), The Joint Supporters[1], Hess Microgen, Nuvera Fuel Cells, North Battery Development LLC and Berkshire Development, LLC (collectively, the "DG Commenting Parties") offer the following comments.

1. The DG Commenting Parties. RealEnergy is a Delaware corporation that develops, designs, installs, owns and operates distributed generation ("DG") systems throughout the United States. RealEnergy's DG systems often involve cogeneration, and employ various technologies including reciprocating engines, microturbines and solar photovoltaic systems. RealEnergy has offices in California and New York, and is currently seeking opportunities to develop DG projects in Massachusetts. RealEnergy has offered written comments and testimony in the Department's investigation into DG in D.T.E. 02-38, and has participated in similar proceedings in California, New York, Delaware. RealEnergy also has been active on DG issues at the Federal Energy Regulatory Commission ("FERC") and before various state legislatures and the Congress.

[1] The Distributed Power Coalition of America, Capstone Turbines and IEC Engineering, P.C. Their representative is E Cubed Company, LLC. See ¶ 2 below.

2. The Joint Supporters for purposes of these comments are the Distributed Power Coalition of America; Capstone Turbines; and IEC Engineering, P.C. They can be reached via the E Cubed Company, LLC.

3. Hess Microgen is a leader in packaged cogeneration. Hess Microgen specializes in the design, manufacture, and sale of packaged cogeneration units ranging in size from 75 to 450kW for projects from 75kW to 4MW. Hess Microgen also owns and operates onsite cogeneration systems that pay for themselves entirely from facility-owner savings.

4. Nuvera Fuel Cells is a leading designer and developer of fuel power systems, fuel processors, and fuel cell stacks for the automotive, distributed generation, commercial and industrial markets in the U.S. and internationally.

5. North Battery Development, LLC is a company undertaking the development of homes throughout New England.

6. Berkshire Development, LLC, is a commercial property development company doing business in Massachusetts, New York and New Hampshire.

7. Interests of DG Commenting Parties in the Joint Investigation. Developers of DG seek a fair and level playing field on which to compete in developing DG projects that offer efficient energy solutions to consumer energy needs. The DG industry, supported by the U.S. Environmental Protection Agency and U.S. Department of Energy, believes that clean, efficient and new DG – particularly combined heat and power and renewable technologies – provides substantial benefits to ratepayers, the public at large, and distribution companies. These benefits come in the form of increased grid reliability and capacity, reduced capital and operating expenses for grid equipment, reduced peak electric-market power prices, and reduced air emissions.

8. This Investigation aims at creating an "alternative planning process" (in lieu of the integrated resource plans required under former 220 CMR §§10.00 et seq.) that aims at maintaining and improving transmission- and distribution-system reliability. In the Request for Comments, the Department and the Siting Board proposed that the investor-owned electric companies should file detailed annual reports that focus "on forecasts of electric loads to be served and the management of their local distribution systems." Request for Comments at 4 (footnote omitted). A key component of the reports would be notice (with varying levels of detail) of all distribution and transmission projects planned for the distribution company's service territory within the following ten years. Id. at 5-6.

9. The DG Commenting Parties support the alternative process insofar as it directs the distribution companies away from forecasting how to procure sufficient generation resources towards forecasting optimal maintenance and improvement of transmission and distribution networks. The alternative process is in the public interest and reflects the changes to the electric industry experienced since 1997. Nevertheless, the Department (and, to a lesser degree, the Siting Board) must use this Investigation to ensure that the annual reports filed under the alternative process truly yield optimum transmission- and distribution-system planning. Such planning should include a full consideration of the ways in which DG can enhance transmission and distribution systems.

10. Need for Integrating DG into System Planning. In their Initial and Reply Comments in D.T.E. 02-38 (hereafter, "DG Initial Comments" and "DG Reply Comments"), the DG Commenting Parties described in general terms two benefits that DG systems can provide to transmission and distribution networks. First, DG can *relieve transmission and distribution congestion*. By intelligently siting DG systems at or near load, distribution companies are able to

defer investment in system upgrades. Second, DG *avoids electric losses* associated with transporting power. Depending on the transport distance and the voltage of the line, electric losses can range from 5% to 25%. Line losses approach the upper boundary on very hot days and at other times when the system is stressed and power is most needed. DG systems do not experience such losses, and thereby reduce the need for loss-related system upgrades. See DG Initial Comments at 15-16.

11. While DG can reduce the need for distribution-system upgrades, such reductions will occur only if the *planning process* gives DG providers a meaningful opportunity to make the case for DG alternatives to such upgrades. Currently, DG providers do not have such opportunities. Distribution companies historically have been hostile to DG, and the Electric Industry Restructuring Act of 1997 has created substantial disincentives for distribution companies to own DG systems themselves. See DG Initial Comments at 3-6; DG Reply Comments at 2-3, 13, and 15-16. For these reasons, the DG Commenting Parties urged the Department in D.T.E. 02-38 to create incentives for distribution companies to rely on DG systems in lieu of upgrades, if the economics of a DG alternative are superior. The DG Commenting Parties proposed that the Department require distribution companies to (a) prepare public reports identifying any needed major system upgrade or repair, (b) estimate the cost of such upgrade or repair, and (c) allow qualified DG companies to bid against the distribution companies' estimates, with the low bidder winning the right to install and operate the DG system. The DG provider's right to install the system would be subject to an agreement among the DG customer, the DG provider and the distribution company permitting sharing of the avoided system-upgrade costs. See DG Initial Comments at 16-17; DG Reply Comments at 13-14.

12. Response to Department and Siting Board's Questions. In their Request for Comments, the Department and the Siting Board raised three specific questions for comment. The answers of the DG Commenting Parties to these questions are set forth below. (The Siting Board raised four additional questions that pertain solely to high-voltage transmission improvements. The DG Commenting Parties have no views on those questions.)

Question No. 1: Does the proposed alternative process provide all of the information that the Department needs to ensure distribution system reliability? What additional elements, if any, should be included in an alternative process that focuses on distribution system reliability?

Answer: The proposed alternative process requires disclosure of most, but not all, of the information the Department needs to ensure distribution-system reliability. The proposed alternative process requires the distribution companies to provide, on an annual basis, (a) a ten-year forecast of peak demand; (b) planning criteria and guidelines for the entire distribution-system planning process; (c) an operating study showing system power flows and voltages under normal and emergency conditions; (d) a list of critical loads (e.g., hospitals) by town and feeding circuits; (e) a list of proposed reliability and infrastructure improvements; and (f) a list of improvement priorities. The alternative process does not expressly require disclosure of two other pieces of critical planning information: (1) an identification of those circuits that are approaching capacity during periods of peak load; and (2) an identification of those areas in which the distribution companies "solve" reliability problems by refusing to accommodate further load growth (for example, areas where, owing to existing development or other site constraints, it is impossible to expand transformer facilities). Without this information, the Department will not have a complete picture of existing and/or future problem areas in the distribution system.

Question No. 2: Are there other issues other than those raised in Section II.A above which must necessarily be included in an alternative process that is consistent with the public interest? If so, what are these issues, and why are they important?

Answer: For the reasons explained in ¶¶ 7-11 above, it is in the public interest for the distribution companies to describe their proposed transmission and distribution improvements in sufficient detail so that DG providers can "bid against" them. (If a retail customer installed its own DG system without the assistance of an outside DG provider, the distribution system would realize all of the benefits of the addition of that DG system at absolutely no cost to the distribution company or its ratepayers.) Unless such information about system needs and proposed improvements is made public, the Commonwealth's ratepayers will have to rely upon the judgment of the distribution companies as to where using DG may be better than upgrading monopoly-owned networks. Use of DG systems is presently not in the interests of the distribution companies, and one cannot rely upon them to make a cost/benefit calculation that properly assesses DG's potential.

Question No. 3: Is further definition of any element of the alternative process proposed in Section II.B needed to ensure that there is a common understanding of electric company responsibilities under the alternative process?

Answer: See answer to Question No. 1. Furthermore, in element (e) of the proposed alternative process, the distribution companies are asked to submit a list of proposed reliability and infrastructure improvements. This element should be defined so to require the distribution companies to describe the proposed improvements with sufficient detail to allow DG providers

to determine whether DG alternatives could defer, or eliminate altogether, the need for network investment.

REAL ENERGY, INC., THE JOINT SUPPORTERS, HESS MICROGEN, NUVERA FUEL CELLS, NORTH BATTERY DELIVERY LLC, and BERKSHIRE DEVELOPMENT, LLC,

By their attorneys,

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Dated: September 12, 2002

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